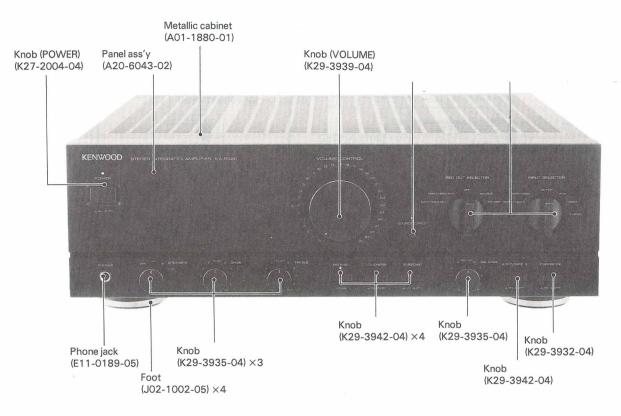
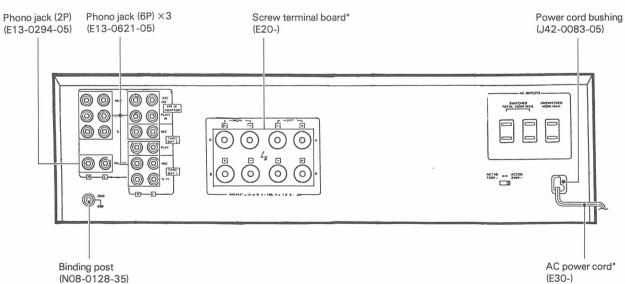
# KA-5020 SERVICE MANUAL

# KENWOOD

©1990-5 PRINTED IN JAPAN B51-4049-00(S)1621





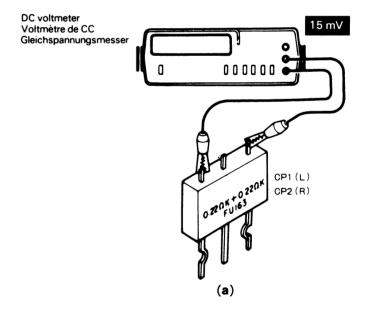
# KA-5020

# ADJUSTMENT/REGLAGE/ABGLEICH

No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	AMPLIFIER SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG.
1	IDLE CURRENT	_	Connect a DC voltmeter across CP1 (CP3) CP2 (CP4)	VOLUME: 0	VR1 (L) VR2 (R)	15 mV	(a)

N°	ITEM	REGLAGE DE L'ENTREE	REGLAGE DE LA SORTIE	REGLAGE DE L'AMPLIFICATEUR	POINT L'ALIGNEMENT	ALIGNER POUR	FIG.
1	COURANT DE POLARISATION	_	Connecter un voltmètre de CC sur CP1 (G) (CP3) CP2 (D) (CP4)	VOLUME: 0	VR1 (G) VR2 (D)	15 mV	(a)

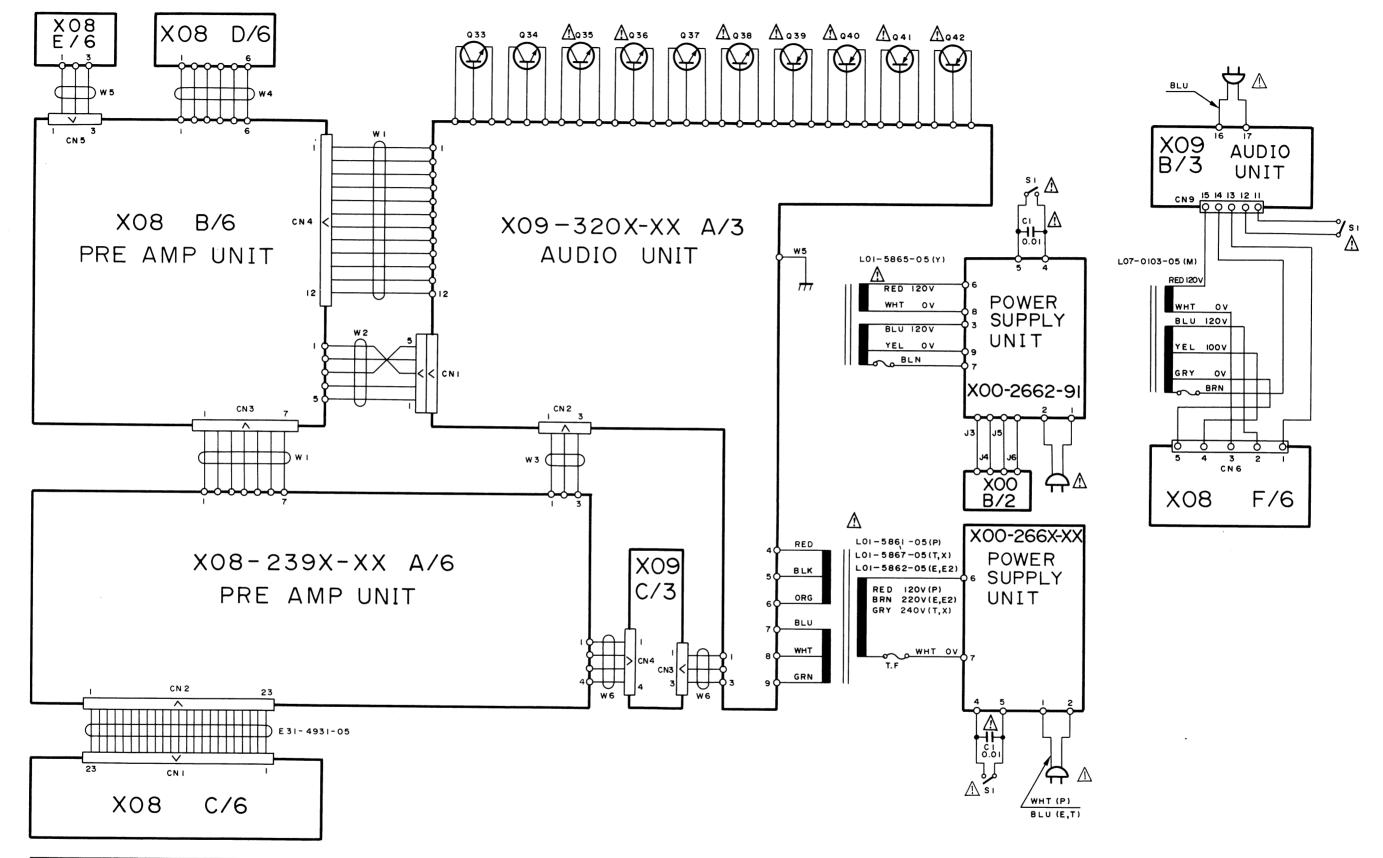
NR.	GEGENSTAND	EINGANGS- EINSTELLUNG	AUSGANGS- EINSTELLUNG	VERSTÄRKER EINSTELLUNG	ABGLEICH- PUNKTE	ABGLEICHEN FÜR	ABB.
1	LEERLAUFSTROM	_	Einen Gleichspannungs- messer über CP1 (L)(CP3) CP2 (R) (CP4) anschließen	VOLUME: 0	VR1 (L) VR2 (R)	15 mV	(a)



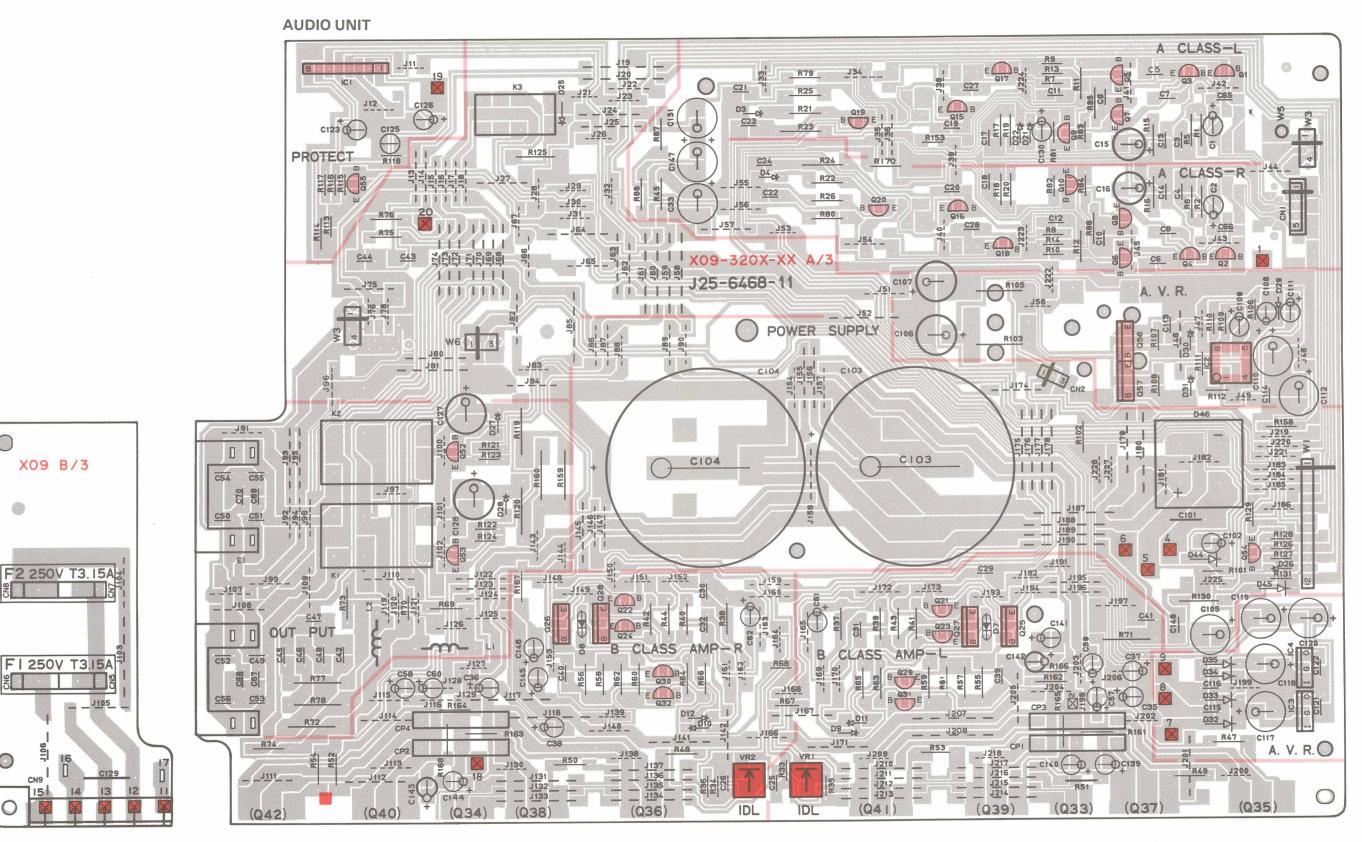
2

### **WIRING DIAGRAM**

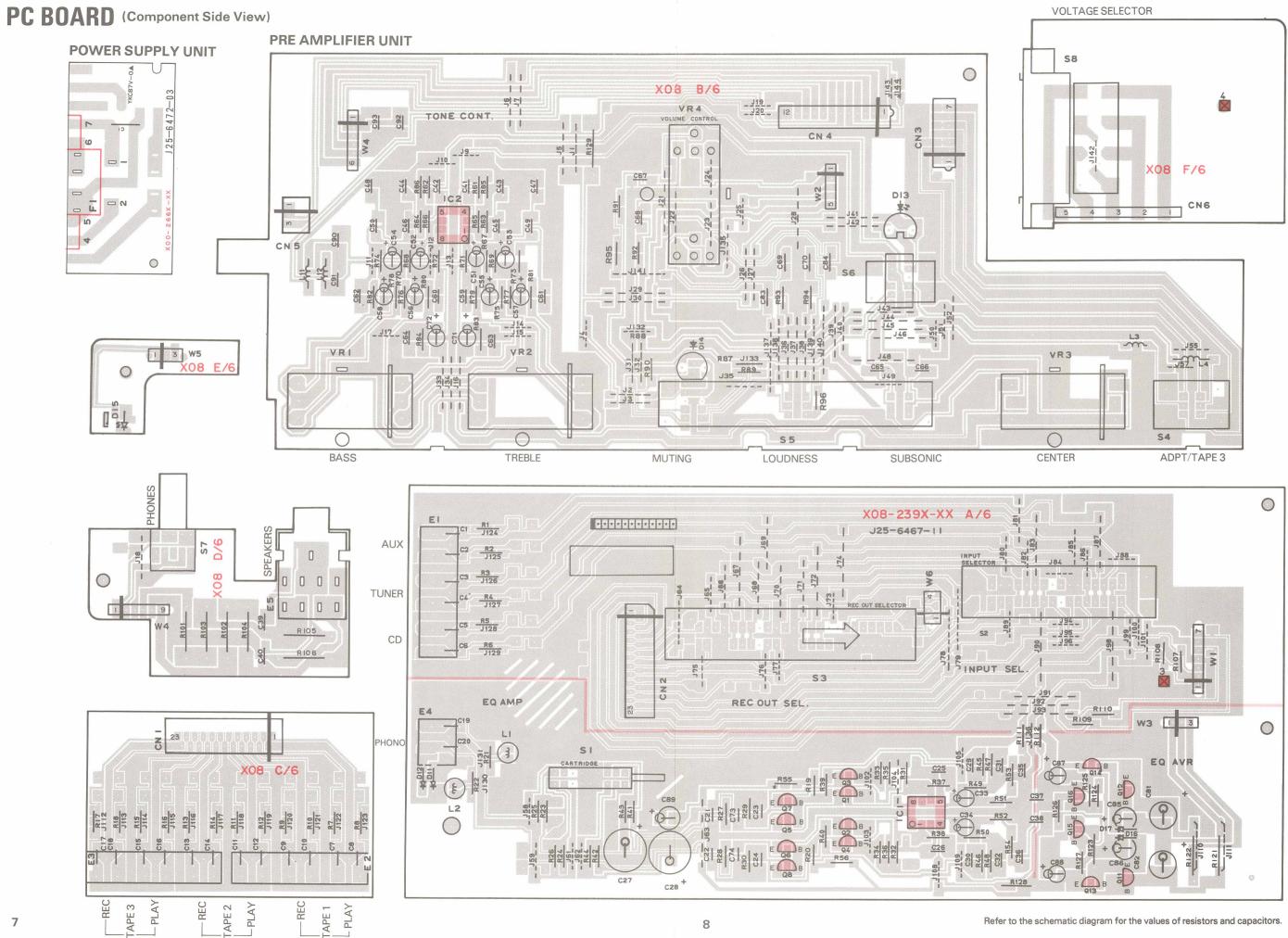
# KA-5020 KA-5020

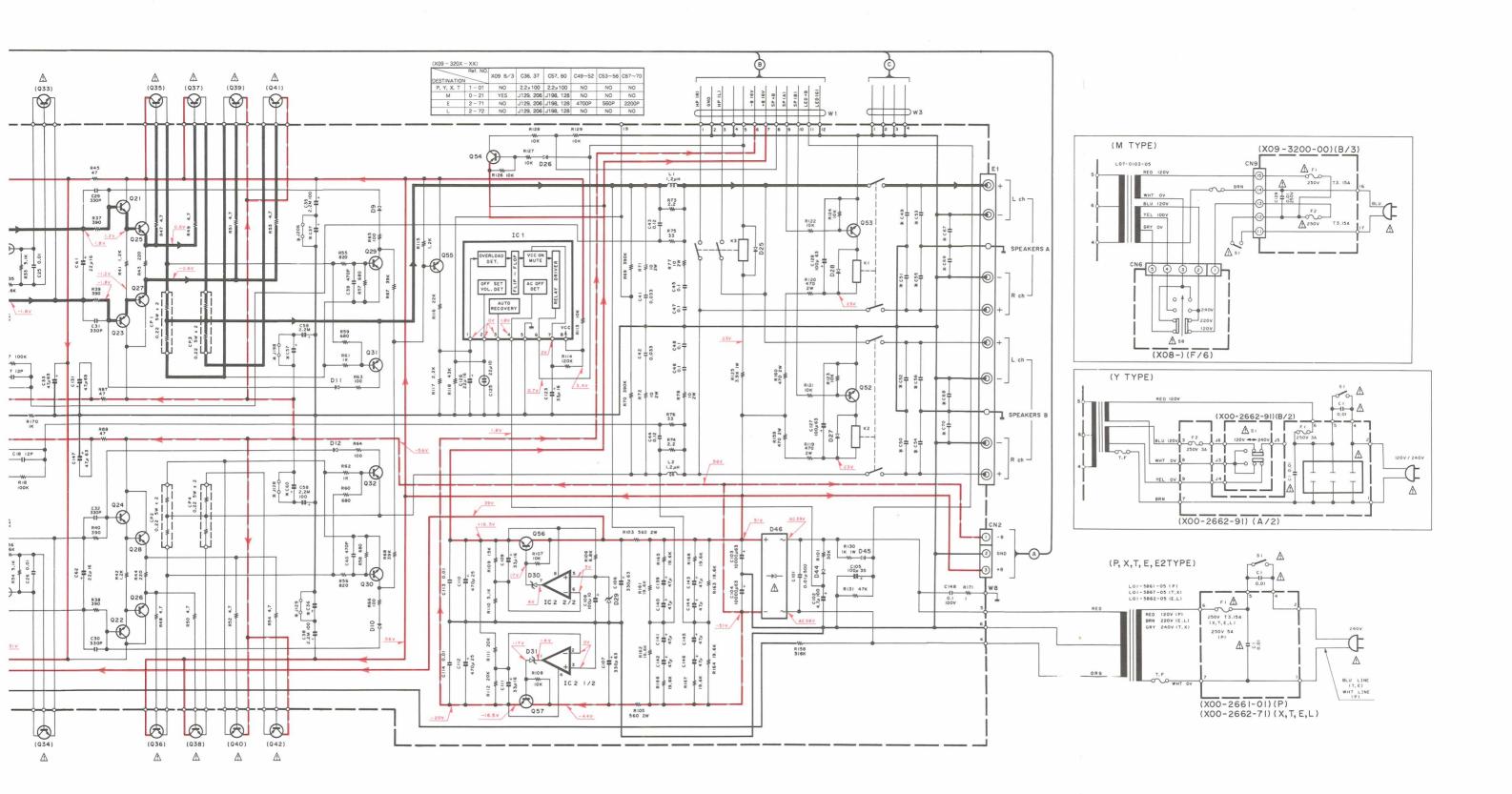


DESTINATION UNIT NO	P	Y	М	х,т	E	E 2
X00 - 266	1-01	2-91	NO.	2 -	71	
X 08 - 239	2-	72	0-21	2-72	0.71	. 70
X09-320	1-	01	0-21	1-01	2-71	2-72



Refer to the schematic diagram for the values of resistors and capacitors.





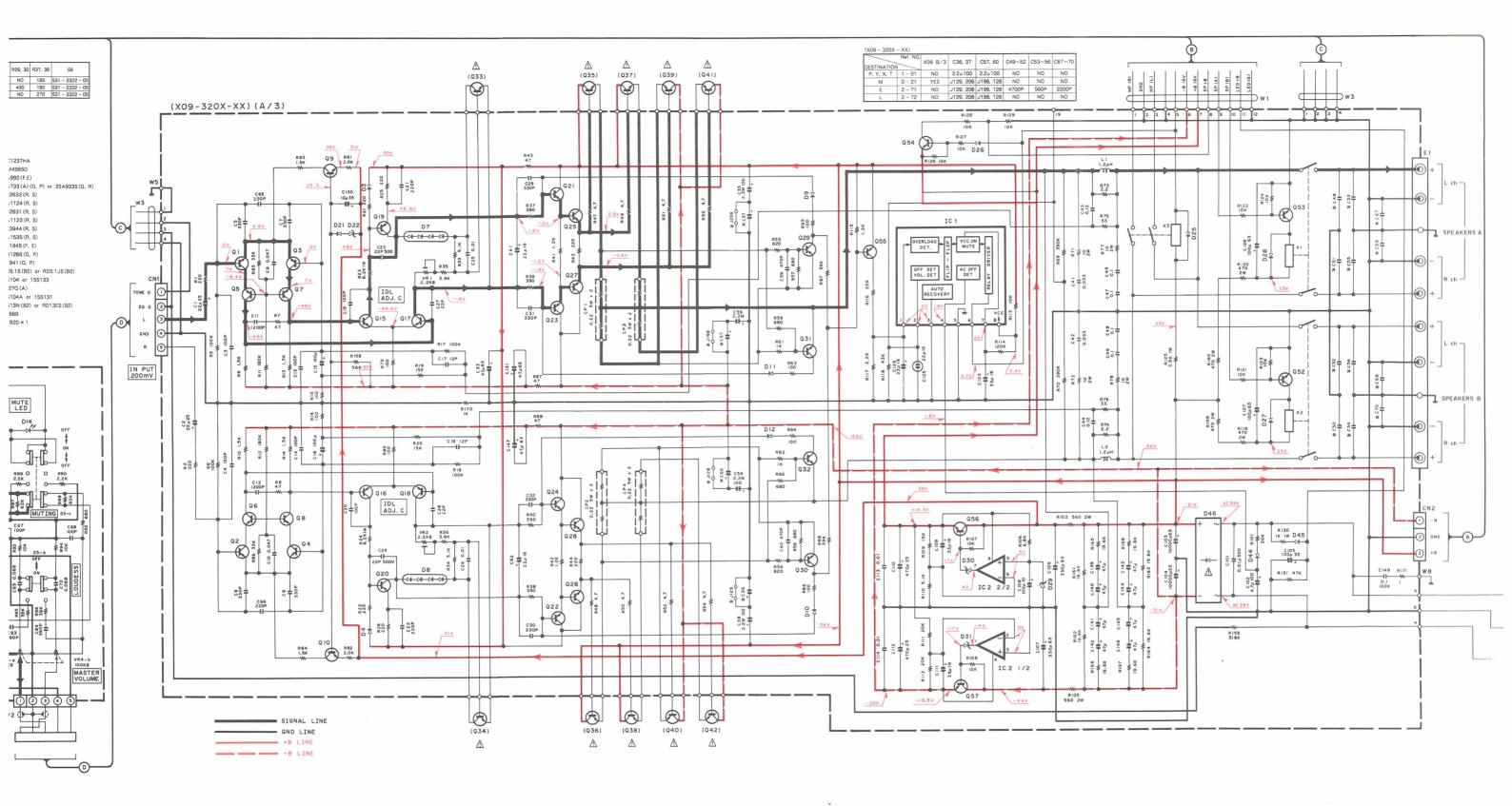
CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). A Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.

Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance. Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.

Die angegebenen Gleichspannungswerte wurden mit einem hochohmigen Spannungsmesser gemessen. Dabei schwanken die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u. U. geringfügig.







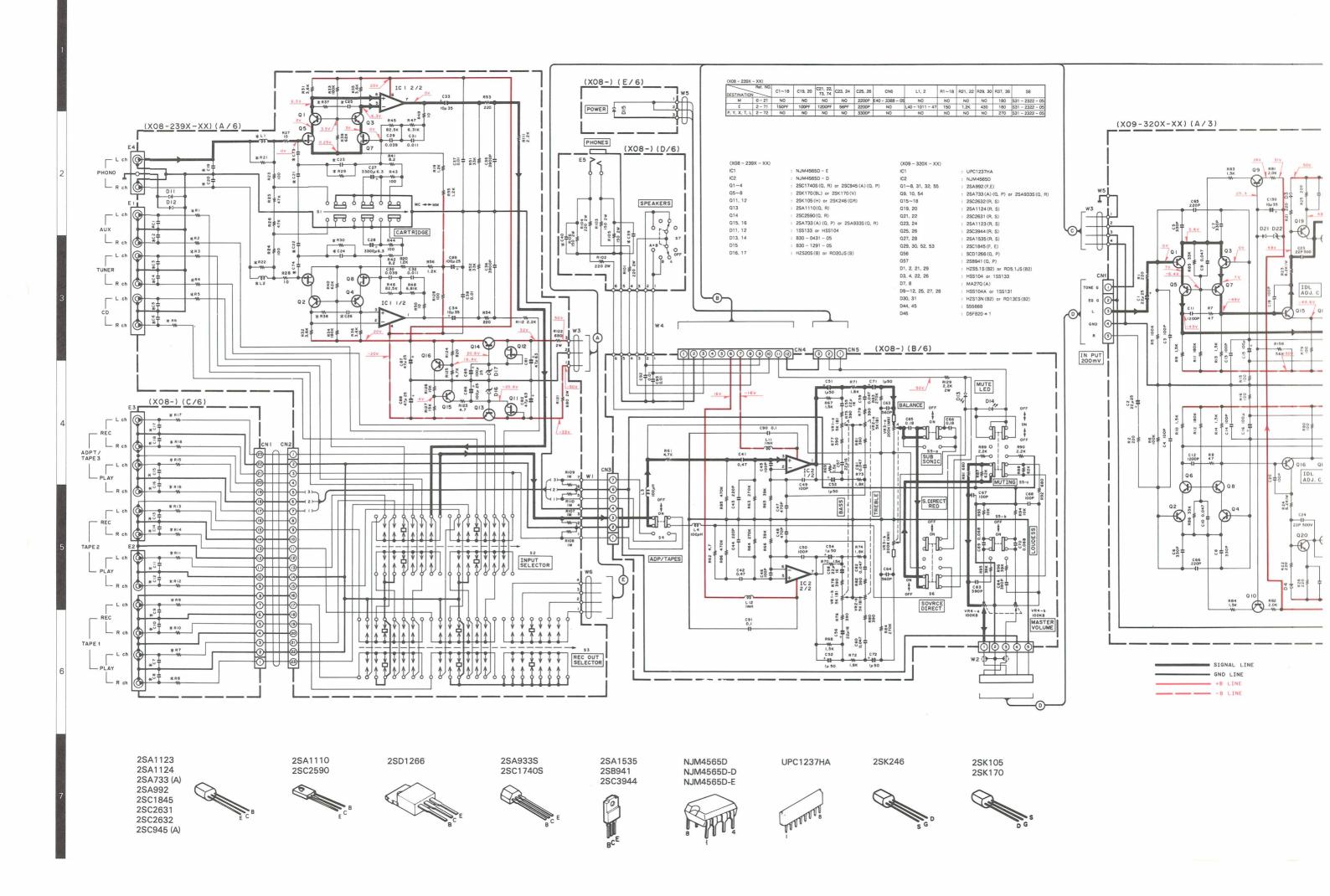


CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). A Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

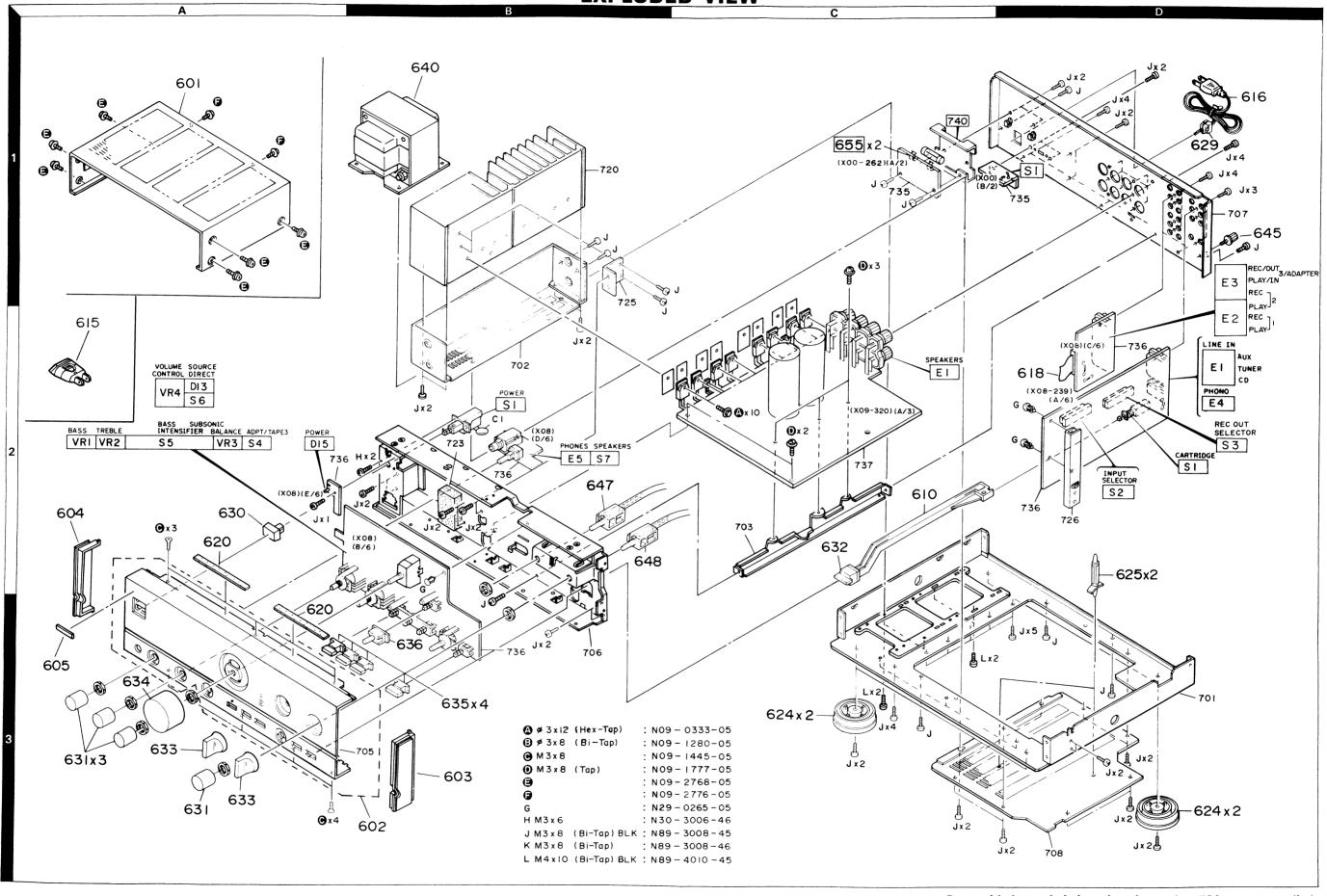
DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.

Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance. Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.

Die angegebenen Gleichspannungswerte wurden mit einem hochohmigen Spannungsmesser gemessen. Dabei schwanken die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u. U. geringfügig.



# KA-5020 KA-5020 EXPLODED VIEW



20

SPEAKERS

(X08-239) (A/6)

736

708

Lx2

KA-5020 KA-5020

#### **PARTS LIST**

\* New Parts FANT

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Telle ohne Parts No. werden nicht geliefert.

	Ref. No.	Address	New	1	Description	Desti-	Re-
	参照番号	位 置	新	l	部品名/規格	nation 仕 向	marks
				K	(A-5020		1
	601 602	1A 3A,3B	*	A01-1880-01 A20-6043-02	METALLIC CABINET PANEL ASSY		
	603 604 605 -	3B 2A,3A 3A	*	B07-1950-04 B07-1951-04 B43-0287-04 B46-0094-03 B46-0095-03	SIDE ESCUTCHEON(L) SIDE ESCUTCHEON(R) KENWOOD BADGE WARRANTY CARD WARRANTY CARD	Y Y	
	- - - - -			B46-0096-13 B46-0121-03 B46-0122-13 B46-0143-13 B58-0513-04	WARRANTY CARD WARRANTY CARD WARRANTY CARD WARRANTY CARD CAUTION CARD (PRESET220-240)	X P EE2 T Y	
	- - - - -		* * *	B58-0803-13 B60-0128-00 B60-0129-00 B60-0130-00 B60-0131-00	CAUTION CARD INSTRUCTION MANUAL (ENGLISH) INSTRUCTION MANUAL (FRENCH) INSTRUCTION MANUAL (SPA,CHA) INSTRUCTION MANUAL (GE,DU,IT)	E PEE2 M EE2	
<u>^</u>	C1	2B		C91-0971-05	FILM 0.01UF 250WV		
	610	2C		D21-1505-03	EXTENSION SHAFT		
	615 616 616 616 616	2A 1D 1D 1D 1D		E03-0115-05 E30-0459-05 E30-0812-05 E30-0974-05 E30-1341-05	AC PLUG ADAPTER AC POWER CORD AC POWER CORD AC POWER CORD AC POWER CORD	M MEE2 Y P X	
Δ	616 618	1 D 2 D		E30-1416-05 E31-4931-05	AC POWER CORD. FLAT CABLE	T	
<u>↑</u>	F1 F1 F1 ,2 F1 ,2			F05-3121-05 F06-5022-05 F05-2521-05 F05-3121-05	FUSE (SEMKO) (250V T3.15A) FUSE (UL) (250V 5A) FUSE (250V 2.5A) FUSE (SEMKO) (250V T3.15A)	XTEE2 P Y M	
	620	2A,3A	*	G10-0402-04	CUSHION (110X5X1)		
	- - - -		*	H01-8806-04 H10-3832-02 H10-3833-12 H25-0225-04 H25-0232-04	ITEM CARTON CASE POLYSTYRENE FOAMED FIXTURE POLYSTYRENE FOAMED FIXTURE PROTECTION BAG (850X450X0.03) PROTECTION BAG (235X350X0.03)		
	624 625 629 -	3C,3D 2D 1D		J02-1002-05 J19-0581-05 J42-0083-05 J61-0307-05	FOOT UNIT HOLDER POWER CORD BUSHING WIRE BAND		
	630 631 632 633 634	3C 3A	* * *	K27-2004-04 K29-3935-04 K29-3932-04 K29-3938-04 K29-3939-04	KNOB (POWER) KNOB (BASS,TREBLE,SPEAKERS) KNOB (CARTRIDGE) KNOB (RECOUT SEL,INPUT SEL) KNOB (MAIN VR)		
	635 636	3A,3B 3B		K29-3942-04 K29-3506-04	KNOB (MUT,LOUD,SUB,ADPT/TAPE) KNOB (SOURCE DIRECT)		0
		1B 1B			POWER TRANSFORMER POWER TRANSFORMER	P EE2	

E: Europe	K:USA	P: Canada
Y: PX(Far East, Hawaii)	T: England	M: Other Areas
Y: AAFES(Europe)	X: Australia	E2: Scandinavia

15

♠ indicates safety critical components.

× New Parts

Parts without Parts No. a Les articles non mention Telle ohne Parts No. werd

					werc
	Re	f. No		Add	ires
	参	照番	号	位	
	640 640 640			1B 1B 1B	
	645 A B C D			1 D 2 C 2 B 2 A, 2 C	ЗА
	E F G H J			1A 1A 2D, 2B 1B,	
	L			3C	
<u>^</u>	647 648 S1 S1 S1			2B 2B 2B 2B 2B	
	Q33 Q35 Q39	,34 -38 -42			
Δ		v	PC	)ŅI	ERS
<u>^\(\)</u>	C1 C1				
Δ				10	
<u>^\frac{1}{\text{\Lambda}}}</u>	650 650			1 C 1 C	
<u>^</u>				1C, 1C,	1 D 1 D
<u>↑</u>	650 655				1 D 1 D
	650 655 655			1C, 1C,	1 D 1 D
	650 655 655 K S1		PRI	1C, 1C,	
	650 655 655 K	,14	PRI	1C, 1C,	
	650 655 655 K S1		PRI	1C, 1C,	
	650 655 655 K S1 D13 D15 C1 C19 C21	,14 -18 ,20 ,22 ,24	PRI	1C, 1C,	
	650 655 655 K S1 D13 D15 C1 C29 C21 C23 C25 C27 C29	,14 -18 ,20 ,22 ,24 ,26 ,30 ,32 ,34	PRI	1C, 1C,	
	650 655 K S1 D13 D15 C1 C29 C21 C23 C25 C27 C29 C31 C33 C35 C37 C37 C34 C44 C44	,14 -18 ,20 ,22 ,24 ,26 ,33 ,33 ,36 ,38 ,40 ,42	PRI	1C, 1C,	

E: Europe

Y: PX(Far East, Hawaii)
Y: AAFES(Europe)

**645** 

REC/OUT 3/ADAPTER PLAY/IN

E 2 REC ]

LINE IN

PHONO E 4

624 x 2

SI

INPUT SELECTOR EI TUNER

REC OUT SELECTOR

16

#### **PARTS LIST**

\* New Parts

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Ref. No.	Address	New Parts	1	ts No	).	Description Desti-	Re-
参照番号	位 置	新	部品	番	号		mark 備考
					K	A-5020	-1
601 602	1A 3A,3B	*	A01-188 A20-604			METALLIC CABINET PANEL ASSY	
603 604 605 -	3B 2A,3A 3A	4	B07-195 B07-195 B43-028 B46-009 B46-009	1-04 7-04 4-03		SIDE ESCUTCHEON(L) SIDE ESCUTCHEON(R) KENWOOD BADGE WARRANTY CARD WARRANTY CARD Y	
- - - -			B46-009 B46-012 B46-012 B46-014 B58-051	1-03 2-13 3-13		WARRANTY CARD WARRANTY CARD WARRANTY CARD WARRANTY CARD TO CAUTION CARD (PRESET220-240)	
- - - -		* * *	B58-080 B60-012 B60-012 B60-013 B60-013	8-00 9-00 0-00		CAUTION CARD INSTRUCTION MANUAL (ENGLISH) INSTRUCTION MANUAL (FRENCH) INSTRUCTION MANUAL (SPA,CHA) INSTRUCTION MANUAL (GE,DU,IT) EE2	
C1	2B		C91-097	1-05		FILM 0.01UF 250WV	
610	2C		D21-150	5-03		EXTENSION SHAFT	
615 616 616 616 616	2A 1D 1D 1D 1D		E03-011 E30-045 E30-081 E30-097 E30-134	9-05 2-05 4-05		AC PLUG ADAPTER AC POWER CORD X	
616 618	1 D 2 D		E30-141 E31-493			AC POWER CORD. TLAT CABLE	
F1 F1 F1 ,2 F1 ,2			F05-312 F06-502 F05-252 F05-312	2-05 1-05		FUSE (SEMKO) (250V T3.15A) XTEE2 FUSE (UL) (250V 5A) P FUSE (250V 2.5A) Y FUSE (SEMKO) (250V T3.15A) M	
620	2A,3A	*	G10-040	2-04		CUSHI <b>0N</b> (110X5X1)	
- - - -		*	H01-880 H10-383 H10-383 H25-022 H25-023	2-02 3-12 5-04		ITEM CARTON CASE POLYSTYRENE FOAMED FIXTURE POLYSTYRENE FOAMED FIXTURE PROTECTION BAG (850X450X0.03) PROTECTION BAG (235X350X0.03)	
624 625 629	3C,3D 2D 1D		J02-100; J19-058; J42-008; J61-030;	1-05 3-05		FOOT UNIT HOLDER POWER CORD BUSHING WIRE BAND	
630 631 632 633 634	3C 3A	* * *	K27-2004 K29-393 K29-3932 K29-3938 K29-3938	5-04 2-04 3-04		KNOB (POWER) KNOB (BASS, TREBLE, SPEAKERS) KNOB (CARTRIDGE) KNOB (RECOUT SEL, INPUT SEL) KNOB (MAIN VR)	
635 636	3A,3B 3B		K29-3942 K29-3506			KNOB (MUT,LOUD,SUB,ADPT/TAPE) KNOB (SOURCE DIRECT)	0
640 640	1B 1B		L01-5861 L01-5862			POWER TRANSFORMER P POWER TRANSFORMER EE2	

E: Europe K: USA

Y: AAFES(Europe)

P: Canada Y: PX(Far East, Hawaii) T: England M: Other Areas

X: Australia E2: Scandinavia

⚠ indicates safety critical components.

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	Ref. No.	Address		Р	arts	No		Description		Re-
	参照番号	位 置	Parts 新	部	品	番	号	部品名/規格		marks 備考
	640 640 640	1B 1B 1B	*	L01-50 L01-50 L07-0	867-	05		POWER TRANSFORMER	Y XT M	
	645 A B C D	1D 2C 2B 2A,3A 2C		N08-0 N09-0 N09-1 N09-1 N09-1	333- 280- 445-	-05 -05 -05		BINDING POST (EARTH) TAPPING SCREW (3X12) TAPTITE SCREW (3X8) SET SCREW (M3X8) SEMS (TAPTITE SCREW)		
	E F G H J	1A 1A 2D,2B 2B 1B,1D	*	N09-2' N09-2' N29-0' N30-3 N89-3	776- 265- 006-	-05 -05 -46		SEMS (TAPTITE SCREW)(4X8) SEMS (TAPTITE SCREW) PUSH RIVET PAN HEAD MACHINE SCREW BINDING HEAD TAPTITE SCREW		
	L	3C		N89-4	010-	-45		BINDING HEAD TAPTITE SCREW		
<u>^</u>	647 648 S1 S1 S1	2B 2B 2B 2B 2B		S90-0 S90-0 S40-1 S40-1 S40-1	111- 073- 073-	-05 -05 -05		PUSH SWITCH (POWER SW)	YMXTE E2 P	
	Q33 ,34 Q35 -38 Q39 -42		*	2SC41 2SC44 2SA16	67LE 94LE	}*5 }*5		TRANSISTOR TRANSISTOR TRANSISTOR		
		WER S	UPI				00-26	61-01: P, 2-71: X, T, E, E2, 2-91: Y		
<u>^</u>	C1 C1			C91-0		-			PYXTE E2	
<u>^</u>	650 650	1C 1C		E03-0				AC OUTLET AC OUTLET	Y P	
	655 655	1C,1D 1C,1D		J13-0					PY XTEE2	
	К	1C		N89-3	008-	-46		BINDING HEAD TAPTITE SCREW	XTEE2	
⚠	S1			S31-2				SLIDE SWITCH (POWER SW)	Y	
		E AMPL	IFIE				3-2392	2-72: P, Y, X, T, E2, 0-21: M, 2-71:	E)	
	D13 ,14 D15			B30-0 B30-1				LED(LN21CPH) LED(LN21CPSLX(V)-(TA4))		
	C1 -18 C19 ,20 C21 ,22 C23 ,24 C25 ,26			CF92F CF92F CF92F CC45F CF92F	V1H1 V1H1 SL1H	011 22 156	K J OJ	MF 150PF K MF 100PF K MF 1200PF J CERAMIC 56PF J MF 2200PF J	E E E	
	C27 ,28 C29 ,30 C31 ,32 C33 ,34 C35 ,36			CE04K CF92F CF92F CE04K CF92F	V1H3 V1H1 W1V1	393. 13. 001	J M	ELECTRO 3300UF 6.3WV MF 0.039UF J MF 0.011UF J ELECTRO 10UF 35WV MF 3900PF J		
	C37 ,38 C39 ,40 C41 ,42 C43 ,44 C45 ,46			CF92F CF92F CF92F CF92F	V1H1 V1H4 V1H2	02. 174. 221	J K	MF 0.010UF J MF 1000PF J MF 0.47UF J MF 220PF K MF 100PF K	E	
	C47 ,48			CF92F	V1H4	71.	J	MF 470PF J		

E: Europe K:USA P: Canada Y: PX(Far East, Hawaii) T: England M: Other Areas Y: AAFES(Europe) X: Australia E2: Scandinavia

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Ref. No.	Address	New Parts		Parts	No.	Description	Desti- nation	Re-
参照番号	位置	Parts 新		品	番号	部品名/規格		備考
C49 ,50 C51 -54 C55 -58 C59 -62 C63 ,64			CF92F CE04K CE04K CF92F CK45F	W1H0 W1C2 V1H4	010M 220M 173J	MF 100PF K ELECTRO 1.0UF 50WV ELECTRO 22UF 16WV MF 0.047UF J CERAMIC 560PF K		
C65 ,66 C67 ,68 C69 ,70 C71 ,72 C73 ,74			CF92F CF92F CF92F CE04K CF92F	V1H1 V1H6 W1H6	01K 883J 010M	MF 0.18UF J MF 100PF K MF 0.068UF J ELECTRO 1.0UF 50WV MF 1200PF J	E	
C81 ,82 C83 ,84 C85 ,86 C87 ,88 C89			CE04K CF92F CE04K CE04K CE04K	V1H3 W1E1 W1E4	391K 101M 170M	ELECTRO       47UF       63WV         MF       390PF       K         ELECTRO       100UF       25WV         ELECTRO       47UF       25WV         ELECTRO       100UF       25WV		
C90 ,91 C92 ,93			CF92F CF92F			MF 0.10UF J MF 0.010UF J		
CN1 CN2 E1 -3 E4 E5			E10-2 E10-2 E13-0 E13-0 E11-0	303 621 294	-05 -05 -05	FLAT CABLE CONNECTOR FLAT CABLE CONNECTOR PHONO JACK (AUX,CD,TUNER,TAPE) PHONO JACK (PHONO) PHONE JACK (PHONE)		
L1 ,2 L3 ,4 L11 ,12			L40-1 L40-1 L40-1	011	-17	SMALL FIXED INDUCTOR(100UH,K) SMALL FIXED INDUCTOR(100UH,K) SMALL FIXED INDUCTOR(1.0MH,K)	Е	
R45 ,46 R47 ,48 R101-104 R105,106 R121,122		*	RN14B RS14D RS14D	K2C B3D: B3D	8252FTS 6811FTS 221JTE 151JTE 681JTE			
R123 R128 R129 VR1 ,2 VR3			RD14A RS14D	B2E B3D: 018	4R7JTS 101JTS 222JTE -05 -05	FL-PROOF RD 4.7 J 1/4W FL-PROOF RD 100 J 1/4W FL-PROOF RS 2.2K J 2W POTENTIOMETER(BASS,TREBLE) POTENTIOMETER(BALANCE)		
VR4			R06-5	172	-05	POTENTIOMETER (VOLUME)		
S1 S2 S3 S4 S5			\$40-6 \$90-0 \$90-0 \$40-2 \$42-3	038 078 351	-05 -05	PUSH SWITCH (CARTRIDGE) SLIDE SWITCH (INPUT SELECTOR) SLIDE SWITCH (RECOUT SELECTOR) PUSH SWITCH (ADPT/TAPE3) MULTIPLE PUSH SWITCH(LUD, MUT)		
S6 S7 S8			S40-4 S29-2 S31-2	035	-05	PUSH SWITCH (S-DIRECT) ROTARY SWITCH(SPEAKERS) SLIDE SWITCH (VOLTAGE SELECT)	M	
D11 ,12 D11 ,12 D16 ,17 D16 ,17 IC1		*	HSS10 1SS13 HZS20 RD20J NJM45	3  S(B  S(B	)	DIODE DIODE ZENER DIODE ZENER DIODE IC(OP AMP X2)		
IC2 Q1 -4 Q1 -4 Q5 -8				40S	(Q,R) )(Q,P)	IC(OP AMP X2) TRANSISTOR TRANSISTOR FET		

**PARTS LIST** 

E: Europe K: USA P: Canada Y: PX(Far East, Hawaii) T: England M: Other Areas Y: AAFES(Europe) X: Australia E2: Scandinavia

⚠ indicates safety critical components.

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Ref. No.	Address			arts	No			Des	script	ion		Desti-	Re-
参照番号	位置	Parts 新		品	番	号	部	品	名 /	規	格	nation 仕 向	mark 備考
Q5 -8 Q11 ,12 Q11 ,12 Q13 Q14			2SK17 2SK10 2SK24 2SA11 2SC25	5 (H 6 (GI 1 0 (	) R) ⊋,R:		FET FET FET TRANSISTOR TRANSISTOR						
Q15 ,16 Q15 ,16			2SA73 2SA93				TRANSISTOR TRANSISTOR						
ļ	UDIO (	ĮΝΙ.	T (X09	-32	200	-21: ľ	И, 1-01: Р, Y	, X,	T, 2	-71	: E, 2-72: E	<b>(2</b> )	
C1 ,2 C3 ,4 C5 -8 C9 ,10 C11 ,12			C90-1 CF92F CF92F CF92F CF92F	V1H: V1H: V1H	1011 3311 473	( ( J	ELECTRO MF MF MF MF	1 3 0	2UF 00PF 30PF .047 200P	UF	25WV K K J J		
C13 ,14 C15 ,16 C17 ,18 C19 ,20 C21 ,22			CF92F C90-1 C91-0 CF92F CF92F	783 167 71H:	-05 -05 101	ζ	MF ELECTRO POLYSTY MF MF	1 1 1	00PF 00UF 2PF 00PF 20PF		K 50₩V K K K		
C23 ,24 C25 ,26 C27 ,28 C29 -32 C33			CC45F CF92F C91-0 CF92F CE04K	/1H:  70- /1H:	1033 -05 3311	J (	CERAMIC MF POLYSTY MF ELECTRO	0 2 3	2PF .010 2PF 30PF 7UF		J J K K 63WV	MEE2	
C35 C35 -38 C38 C39 ,40 C41 ,42			CE04KI CE04KI CE04KI CF92FI CF92FI	12A2 12A2 11H4	2R2N 2R2N 1713	1 1 1	ELECTRO ELECTRO ELECTRO MF MF	2 2 4	.2UF .2UF .2UF 70PF .033		100WV 100WV 100WV J J	MEE2 PYXT MEE2	
C43 ,44 C45 -48 C49 -52 C53 -56 C57 -60			CF92FV CF92FV CF92FV CF92FV CE04KV	/1H1 /1H4 /1H5	1043 1723 5613	T T	MF MF MF ELECTRO	0 4 5	.12UI .10UI 700PI 60PF .2UF	F	J J J 100WV	E E PYXT	
C58 ,59 C61 ,62 C65 ,66 C67 -70 C101			CE04KI CE04KI CF92FI CF92FI CK45FE	/1C2 /1H2 /1H2	220M 221K 222J		ELECTRO ELECTRO MF MF CERAMIC	2 2 2	.2UF 2UF 20PF 200PF 200PF		100WV 16WV K J P	MEE2	
C102 C103,104 C105 C106,107 C108			CE04KV C90-18 CE04KV CE04KV CE04KV	322- 71V1 71J3	-05 .01M 331M	 	ELECTRO ELECTRO ELECTRO ELECTRO ELECTRO	1 1 3	.7UF 00000 00UF 30UF 00UF	JF	100WV 63WV 35WV 63WV 10WV		
C109 C110 C111 C112 C113,114			CEO4KV CEO4DV CEO4KV CEO4DV CF92FV	1E4 11C3 11E4	71M 30M 71M		ELECTRO ELECTRO ELECTRO ELECTRO MF	4 3 4	3UF 70UF 3UF 70UF .010U	JF	16WV 25WV 16WV 25WV J		
C123 C125 C126 C127,128 C129			CEO4Kh C90-13 CEO4Kh CEO4Dh C91-14	33- 102 1J1	05 20M 01M		ELECTRO NP-ELEC ELECTRO ELECTRO FILM	2: 2: 1:	3UF 2UF 2UF 00UF .01UF	7	16WV 10WV 16WV 63WV 250AC	M	
1		Ì			OOM							1	

**PARTS LIST** 

E: Europe K:USA P: Canada Y: PX(Far East, Hawaii) T: England M: Other Areas Y: AAFES(Europe) X: Australia E2: Scandinavia ★ New Parts

Parts without Parts No. are not supplied.

Les articles non mentionnes dans le Parts No. ne sont pas fournis.

Telle ohne Parts No. werden nicht geliefert.

Ref. No.	Address	New	1	Parts	No.		Description		Desti-	Re-
参照番号	位 置	新		品	番号	部	品名/規	格		marks 備考
C131 C139-141 C142,143 C144-146 C147			CE04K CE04K CE04K CE04K	W1H4 W1H4 W1H4	70M 70M 70M	ELECTRO ELECTRO ELECTRO ELECTRO ELECTRO	47UF 47UF 47UF 47UF 47UF	63WV 50WV 50WV 50WV 63WV		
E1 E1		*	E20-0			SCREW TERMIN			PYMXTE E2	
CN5 -8			J13-0	075-	05	FUSE CLIP			м	
L1 ,2			L39-0	080-	15	PHASE-COMPEN	NSATION CO	OIL		
CP1 -4 R21 ,22 R23 ,24 R25 ,26 R37 -40			R90-0 RD14AI RS14DI RD14AI RD14AI	82E2 83A8 82E2	21JTS 22JTE 21JTS	MULTI-COMP FL-PROOF RD FL-PROOF RS FL-PROOF RD FL-PROOF RD	0.22X2 220 8.2K 220 390	K 5W J 1/4W J 1W J 1/4W J 1/4W		
R41 ,42 R43 ,44 R45 R47 -50 R51			RD14AI RD14AI RD14AI RD14AI RD14GI	32E2 32E4 32E4	21JTS 70JTS R7JTS	FL-PROOF RD FL-PROOF RD FL-PROOF RD FL-PROOF RD FL-PROOF RD	1.2K 220 47 4.7 4.7	J 1/4W J 1/4W J 1/4W J 1/4W J 1/4W		
R52 -54 R55 ,56 R57 -60 R61 ,62 R63 -66		*	RD14AE RD14AE RD14AE RD14AE RD14AE	32E8 32E6 32E1	21JTS 81JTS 02JTS	FL-PROOF RD FL-PROOF RD FL-PROOF RD FL-PROOF RD FL-PROOF RD	4.7 820 680 1.0K 100	J 1/4W J 1/4W J 1/4W J 1/4W J 1/4W		
R71 ,72 R73 ,74 R75 ,76 R77 ,78 R79 ,80			RS14DE RD14AE RD14AE RS14DE RD14AE	32E2 32E3 33D1	R2JTS 30JTS 00JTE	FL-PROOF RS FL-PROOF RD FL-PROOF RD FL-PROOF RS FL-PROOF RD	10 2.2 33 10 100	J 2W J 1/4W J 1/4W J 2W J 1/4W		
R87 ,88 R102 R103 R105 R119,120		*	RD14AE RN14BK RS14DE RS14DE RS14DE	2E3 3D5 3D5	163FTS 61JTE 61JTE	FL-PROOF RD RN FL-PROOF RS FL-PROOF RS FL-PROOF RS	47 316K 560 560 470	J 1/4W F 1/4W J 2W J 2W J 2W		
R125 R130 R158 R159,160 R161-168		*	RS14DB RS14DB RN14BK RS14DB RN14BK	3A1 2E3 3D4	02JTE 163FTS	FL-PROOF RS FL-PROOF RS RN FL-PROOF RS RN	3.9K 1.0K 316K 470 19.6K	J 1W J 1W F 1/4W J 2W F 1/4W		
R170 VR1 ,2			RN14BK R12-10			RN TRIM POT.	1.00K 2.2K	F 1/4W		
K1 ,2 K3			S51-20 S51-20			MAGNETIC RELA				
D3 ,4 D3 ,4 D7 ,8 D9 -12 D9 -12			HSS104 1SS133 MA27Q( HSS104 1SS131	A) A		DIODE DIODE VARISTOR DIODE DIODE				
D 21 D 21 D 22 D 22			HSS104 1SS133 HZS5.1 RD5.1J	S(B2	2)	DIODE DIODE ZENER DIODE ZENER DIODE				

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#### ⚠ indicates safety critical components.

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Teile ohne Parts No. werden nicht geliefert.

Ref. No.	Address	New Parts		Description	Desti- nation	Re-
参照番号	位 置	新	部品番号	部 品 名 / 規 格		備考
D25 D25 D26 D26 D27 ,28			HSS104A 1SS131 HSS104 1SS133 HSS104A	DIODE DIODE DIODE DIODE DIODE		
D27 ,28 D29 D29 D30 ,31 D30 ,31			HZS5.1S(B2) RD5.1JS(B2) HZS13N(B2)	DIODE ZENER DIODE ZENER DIODE ZENER DIODE ZENER DIODE		
D44 ,45 D46 IC1 IC2 Q1 -8			D5FB20*1 UPC1237HA NJM4565D	DIODE DIODE IC(POWER AMP) IC(OP AMP X2) TRANSISTOR		
Q9 ,10 Q9 ,10 Q15 -18 Q19 ,20 Q21 ,22			2SA933S(Q,R) 2SC2632(R,S) 2SA1124(R,S)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR		
Q23 ,24 Q25 ,26 Q27 ,28 Q29 ,30 Q31 ,32			2SC3944(R,S) 2SA1535(R,S) 2SC1845(F,E)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR		
Q52 ,53 Q54 Q54 Q55 Q56			2SA733(A)(Q,P) 2SA933S(Q,R) 2SA992(F,E)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR		
<b>Q</b> 57			2SB941(Q,P)	TRANSISTOR		

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### KA-5020

#### **EXPLODED VIEW**

#### **Rated Power Output**

80 watts per channel minimum RMS, both channels driven, at 8  $\Omega$  from 20 Hz to 20,000 Hz with no more than 0.03% total harmonic distortion

than 0.0576 total harmon	iio distortion
Maximum Continuous Powe	er Output (DIN) 145 W
Maximum Continuous Powe	
	95 W
<b>Maximum Continuous Powe</b>	r Output (IEC/NF)
from 63 Hz to 12,500 Hz	, 0.7% Total Harmonic
	95 W+95 W
Dynamic Power	210 W per channel at 2 $\Omega$
_,	175 W per channel at 4 $\Omega$
	105 W per channel at 8 $\Omega$
Total Harmonic Distortion	100 VV per enamier at 0 W
(LINE input to SPEAKER or	utmut)
Rated Output Power at 8 9	
	0.03%
1/2 Rated Output Power a	
	0.02%
	Ω, 1 kHz0.002%
Frequency Response	
	Hz to 100 kHz $+0$ dB, $-3$ dB
PHONO "RIAA" Response	
	20 Hz to 20 kHz $\pm$ 0.3 dB
PHONO (MC) Input	20 Hz to 20 kHz $\pm$ 0.3 dB
Signal To Noise Ratio	
PHONO (MM) (IHF-A) (IHF	'66) 87 dB for 2.5 mV input
PHONO (MC) (IHF-A) (IHF'	66)69 dB for 0.25 mV input
TUNER/AUX/TAPE/CD	
(IHF-A) (IHF'66)	110 dB for 200 mV input
PHONO (MM) (IHF-A)	80 dB
	74 dB
	<b>F-A)</b> 83 dB
PHONO (MM) at Unweight	•
_	60 dB
TUNER/AUX/TAPE/CD at U	
	62 dB
50 mvv Output (Dilv)	02 ab

Filter	SUBSONIC 18 Hz -6 dB/oct
Tone Control	
	± 10 dB at 100 Hz
	± 10 dB at 10 kHz
	$^{\circ}$ B at 100 Hz, $+3$ dB at 10 kHz
. •	220/50 Hz at 8 $\Omega$
Channel Separation at 1 kl	
	60 dB (Terminated with 2.2 k $\Omega$ )
TUNER/AUX/TAPE/CD	56 dB
	erminated with 47 k $\Omega$ + 250 pF)
Input Sensitivity/Impedance	
	2.5 mV 47 kΩ
	0.2 mV 100 Ω
	200 mV 47 kΩ
Phono Maximum Input Lev	· · · · · · · · · · · · · · · · · · ·
	. <b>D.</b> 150 mV
	<b>D.</b> 12 mV
	<b>I)</b> 150pF
Output Level/Impedance	200 1/ 200 2
	200 mV 220 Ω
General	
Power Consumption	Canada Model
	UK & European Models
	OR & European Models
	W : 440 mm (17-5/16")
	H : 148 mm (5-13/16")
	D : 396 mm (15-9/16")
Weight (net)	11.8 kg (26.0 lb)
Worging (net/	11.8 kg (20.0 lb)

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#### Note:

Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on the Europe (E) standard, and provides information on regional circuit modification through use of alternate schematic diagrams, and information on regional component variations through use of parts list.

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